

JAPANESE PATENT OFFICE  
PATENT JOURNAL  
KOKAI PATENT APPLICATION NO. HEI 3[1991]-69150

Int. Cl. <sup>5</sup> :	H 01 L	25/065 21/603 25/07 25/18
	H 01 L	25/08
Sequence Nos. for Office Use:	6918-5F 7638-5F	
Application No.:	Hei 1[1989]-206199	
Application Date:	August 8, 1989	
Publication Date:	March 25, 1991	
No. of Claims:	4 (Total of 7 pages)	
Examination Request:	Not requested	

LSI ASSEMBLY STRUCTURE

Inventor:	Norio Himuka Koufu NEC Corp. 1-17-14 Marunouchi, Koufu-shi, Yamanashi-ken
Applicant:	Koufu NEC. Corp. 1088-3 Otsu-machi, Koufu-shi, Yamanashi-ken

Agent: - -

Susumu Uchihara,  
patent attorney

[There are no amendments to this patent.]

Claims

1. A type of LSI assembly structure characterized by the following facts: the LSI assembly structure is made up of an LSI substrate wherein a first LSI is fixed face-up on the LSI substrate, and a second LSI is bonded to the surface of the first LSI; in this LSI assembly structure, the second LSI is smaller than the first LSI; the second LSI is bonded with a eutectic metal by means of thermocompressive bonding through the first metal bump formed on the bonding pad (referred to as the first bonding pad hereinafter) on the first LSI surface; the second metal bump on the bonding pad (referred to as the second bonding pad hereinafter) for forming an electrical connection between the aforementioned first LSI and the LSI substrate is formed in the same process as that for the aforementioned first metal bump.

2. The LSI assembly structure characterized by the following facts: the LSI assembly structure is made of an LSI substrate wherein a first LSI is fixed face-up on the LSI substrate, and a second LSI bonded to the element surface of the first LSI; the second LSI is smaller than the first LSI; the second LSI is bonded by means of thermocompressive bonding using an electroconductive sheet through the first metal bump formed on the bonding pad (referred to as the first bonding pad hereinafter) on the first LSI element surface; the configuration of the second metal bump on the bonding pad (referred to as the

second bonding pad hereinafter) for forming an electrical connection between the aforementioned first LSI and the LSI substrate is formed in the same process as that for the configuration of the metal bump on the aforementioned first bonding pad.

3. The LSI assembly structure described in Claim 2 characterized by the fact that the aforementioned first LSI and the aforementioned second LSI are bonded to each other by means of thermocompressive bonding using an electroconductive sheet through the aforementioned first metal bump.

4. The LSI assembly structure characterized by the following facts: the LSI assembly structure is made up of an LSI substrate, wherein a first LSI is fixed face-up on the LSI substrate wherein a second LSI is bonded to the element surface of the first LSI; in this LSI assembly structure, the second LSI is smaller than the first LSI; the second LSI is bonded by means of soldering by heat processing the soldering bump formed on the bonding pad (referred to as the first bonding pad hereinafter) on the first LSI element surface; the configuration of the second metal bump on the bonding pad (referred to as the second bonding pad hereinafter) for forming an electrical connection between the aforementioned first LSI and the LSI substrate is formed in the same process as that for the configuration of the metal bump on the aforementioned first LSI bonding pad.

\* \* \*